The Impact of Self-Regulated Strategy Development on Intermediate EFL Learners' Capability in Self-Regulating Reading

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Abstract

Academic self-regulation is a process in which learners use cognitive, affective, behavioral, and motivational feedback to adjust or modify their behaviors and strategies to reach their objectives. Similarly, self-regulated learning (SLR) is the process of defining objectives, planning strategically, choosing and utilizing strategies, monitoring one's efficiency, and self-evaluating oneself. Accordingly, this research explored the influence of self-regulation teaching based on Think Before, While, and After reading (TWA) strategy with self-regulated strategy development (SRSD) on intermediate English as a foreign language (EFL) learners' self-regulation of their EFL reading of expository texts. SRSD for TWA strategy was implemented in the EFL reading sessions of the intact experimental group, but the intact control group was given routine EFL reading instruction, i.e., to read the texts and answer its comprehension questions. The self-regulation data was collected utilizing the adjusted Motivated Strategies for Learning Questionnaire Parametric (MSLQ) before and after the instruction. Through one-way analysis of the covariance, it was shown that self-regulation instruction based on TWA with SRSD could foster self-regulatory reading skills of EFL learners. These findings can urge teachers to teach EFL readers SRSD for TWA to improve their ability to self-regulate their EFL reading process.

Keywords: self-regulation, strategy development, reading, self-regulated learning (SLR), intermediate EFL learners

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Introduction

As Second Language (L2) reading leads to not only learning but also enjoyment (Nation, 2009), it is of paramount importance in the second language (L2) acquisition. Mori (2004) maintains that reading is also an essential and most probably a crucial skill for learners in the English as a Foreign Language (EFL) context. This necessitates the development of necessary reading strategies in EFL learners (Grabe, 2009, 2014), including self-regulation or Self-Regulated Learning (SRL) strategies which can enhance reading in both First Language (L1) (e.g., Housand & Reis, 2008; Swalander & Taube, 2007) and L2/EFL (e.g., Mbato, 2013; Morshedian et al. 2017).

Academic self-regulation is a process in which learners use cognitive, affective, behavioral, and motivational feedback to adjust or modify their behaviors and strategies in order to achieve their goals. Similarly, SLR is the degree to which students can define goals, make a strategic plan, choose and utilize strategies, and self-monitor and self-evaluate their effectiveness and themselves (Zimmerman, 2008). On the one hand, teachers can explicitly teach and model self-regulation and its strategies (Zimmerman, 2002). On the other hand, skillful readers are regarded as self-regulating and active learners (Harris & Pressley, 1991, as cited in Woolley, 2011). Hence, a vital dimension of being a skillful reader is self-regulating one's reading process (Butler, 2002, as cited in Woolley, 2011).

Among the self-regulation models that were applied to L1 reading (e.g., Mason et al., 2006) and can be used in EFL reading (e.g., Hamoulah Mardani & Afghari, 2017; Roohani & Asiabani, 2015) is Self-Regulated Strategy Development (SRSD; Harris & Graham, 1996). It has been originally developed to assist students who encounter significant writing difficulties, but because it is a teaching model that combines the teaching of self-regulation processes and strategy instruction (Mason, 2004), it can be applied to other language skills such as reading. It is aimed at helping students become independent, fluent, and goal-directed learners (Mason, 2004). On the whole, in the L1 context, Graham, Harris, their colleagues, and other researchers have validated SRSD with students struggling with reading in more than 25 research studies conducted in 20 years (Graham & Harris, 2003, as cited in Mason, 2004).

SRSD involves six stages, including modeling, guided (collaborative)

practice, and pair/independent practice. Mason (2004) created and implemented it for TWA (i.e., think before, while, and after reading), which is a technique fostering reading (Mason et al., 2006). However, the studies which have been conducted on L2 reading self-regulation (e.g., Mbato, 2013; Morshedian et al., 2017) have not applied SRSD (Harris & Graham, 1996) for Mason's (2004) TWA strategy on EFL reading, and those few that did so (e.g., Hamoulah Mardani & Afghari, 2017; Roohani & Asiabani, 2015; Roohani et al., 2016; Roohani et al., 2017) either focused on the argumentative texts or excluded TWA from their studies, or did not explore the resulting self-regulation ability of EFL learners while reading. Thus, the following research question was formed:

Does self-regulation teaching based on TWA with SRSD significantly influence the intermediate EFL learners' self-regulation of reading?

Review of Literature

SRDS and TWA

SRSD (Harris & Graham, 1996) is an instruction model that brings explicit teaching of self-regulation together with strategy teaching. SRSD was initially created by Harris and Graham (1996) to improve L1 writing in students with learning disabilities or low-achieving students. It has these stages; (a) Create background: prior knowledge is activated and discussed to make sure students have knowledge and skill necessary for reading tasks; (b) Talk about It: the teacher discusses how the strategy use assists reading, (c) Model It: the teacher models cognitively (i.e., his thinking out loud while putting the strategy into practice), (d) Memorize It: the teacher and students commit the strategy to their memory, (e) Back It up: students and the teacher practice it cooperatively and students practice it with partners, and (f) Independent Performance: students practice it independently (Harris & Graham, 1999; Mason et al., 2006).

On the other hand, TWA strategy (think before, while, and after reading), which can foster reading, can be implemented through SRSD (Mason et al., 2006). It is a procedure that includes cognitive strategies in a framework for active engagement in text and can be taught through the SRSD instruction (Mason et al., 2006). In TWA, students learn strategies that can be utilized before, while, and after reading a text. Before they start reading, they learned to find the writer's purposes,

think about their knowledge, and decide about their future learning. Implemented through SRSD, TWA teaching starts with modeling, then comes guided (collaborative) practice, and the final phase is pair or independent practice (Mason, 2004; Mason et al., 2006) (see Table 1).

Table 1

TWA Strategy

(T) think before reading (on)	(W) think while reading (on)	(A) think after reading (on)
The writer's intention	Reading speed	The main idea
What you know	Linking what you know	Summarizing information
What you want to learn	Rereading parts	What you learned

Empirical Studies on SRDS for TWA

Empirical studies investigating TWA within SRSD showed that it could improve L1 reading in struggling readers (e.g., Hedin et al., 2011; Mason et al., 2006; Mason et al., 2012; Mason et al., 2013). Mason (2004), for instance, compared explicit SRSD for TWA with reciprocal questioning strategies in thirty-two fifth-grade students who had difficulty in L1 reading. Both groups showed improvement in their reading ability; however, the TWA intervention was more effective than the reciprocal questioning groups. Mason et al. (2013) also provided SRSD teaching for the TWA for low-achieving students and found out about students' knowledge about the self-regulation techniques taught and learned. Reviewing some studies on SRSD for TWA in both L1 writing and reading, Mason (2013) also reported that students' reading of L1 expository texts improved by SRSD for TWA.

In the L2 and EFL contexts, Hedin et al. (2011) examined the impact of teaching TWA on L2 learners having attention-related and comprehension problems. Through scaffolded support and self-monitoring, their reading improved, and they could regulate their strategy use. Roohani and Asiabani (2015) found out that SRSD through TWA instruction could improve the EFL learners' reading of argumentative texts and significantly enhanced their metacognitive awareness. Interestingly, Hamoulah Mardani and Afghari's (2017) research showed that SRSD could enhance EFL learners' reading of argumentative texts, but it did not significantly influence their metacognitive knowledge. However, these studies neither mixed SRSD for TWA nor explored the resulting self-regulation ability of EFL learners while

reading. In addition, Mason et al. (2006) maintain that TWA with SRSD is an excellent option for teachers to begin, develop, and enhance learners' competence in L1 expository reading. Nevertheless, as mentioned above, no study has yet applied SRSD (Harris & Graham, 1996) for Mason's (2004) TWA strategy on EFL reading, using expository texts and exploring the resulting self-regulation ability of EFL learners while reading, so this research delved into how such specific self-regulation teaching could enhance self-regulation ability in the EFL expository reading.

Method

Participants

The participants in this research study were 40 female Iranian EFL learners placed in two intact reading classes and taught by the researcher in an English language institute. The age range of the participants differed between 19 and 31 (M = 23.30, SD = 6.14). Under the institute policy, they were placed in two intermediate classes of 20 students based on results obtained from a Preliminary English Test (PET) (Hashemi &Thomas, 2009), and *Inside Reading 2* (2nd ed., Zwier, 2016) constituted their reading material. Each class was randomly chosen as the control and experimental groups. That is, the experimental class learned self-regulation as aimed at EFL reading based on SRSD for TWA, and the control class was taught based on routine EFL reading teaching method, i.e., to read the reading selections and do their comprehension exercises.

The Instructional Materials

The reading texts of intermediate classes were chosen from *Inside Reading 2* (2nd ed., Zwier, 2016). The readability indices of two texts from the textbook, calculated through Flesch readability ease (FRE) (Taylor & Weir, 2012), displayed scores ranging from 58 to 64. This indicates standard/average texts to read (DuBay, 2006) that were at the appropriate level for the intermediate participants. The reasons why the teacher worked on the expository reading texts are as follows. First, the expository genre includes various text types and entails using many reading strategies simultaneously (Gersten et al., 2001). Second, empirically text genre does not have an important part in the L2/EFL learners' reading capability (Allen et al., 1988). It is also noteworthy that in both groups the students merely did the

comprehension exercises of the chosen reading texts and did not have to do reading exercises either preceding or following the reading selections.

Instruments

As students' self-regulation ability could be uncovered from self-reported behavior in questionnaires (e.g., Entwistle, 1988, as cited in Boekaerts & Corno, 2005), Pintrich et al.'s (1993) Motivated Strategies for Learning Questionnaire (MSLQ), which includes motivation and learning strategies scales was adapted to reading and was utilized to gauge reading self-regulation. In adapting it, its wording was altered to a small extent so that every sentence seemed relevant to reading. As an example, the sentence, "If I try hard enough, then I will understand the *course* material," was changed to this senetnce, "If I try hard enough, then I will understand the *reading* material."

The internal consistency coefficients reported for MSLQ subscales differed from .52 to .92 (Winne & Perry, 2000). Pintrich et al.'s (1993) also proved the content, predictive, and construct validity of the scale. Through confirmatory factor analyses, the developers tested the use of the theoretical model of the MSLQ and specified which items were allocated to which factor. Likewise, from the close relationship between a domain of theory and the scale's items, they established its content validity. The scales in the Learning Strategy section and those in the Motivation section also showed an empirically validated framework for evaluating students' learning strategies and motivation. They also investigated its predictive validity in terms of higher education academic achievement. Most scales in the Motivation and the Learning Strategy section showed significant correlations with final course grades. In this research, the reliability estimates of the pretest and the posttest were found to be $\alpha = .72$ and $\alpha = .77$, respectively. However, the adapted questionnaire was not validated due to practical restrictions, which is considered a limitation of this study.

The Pintrich's (2000) self-regulation model which has some characteristics in common with TWA forms the basis of this questionnaire (Mason et al., 2006). In other words, it has almost three phases roughly corresponding to those TWA (Mason et al., 2006). His model includes the following stages: 1) activation, planning, and forethought 2) monitoring, 3) control, and 4) reflection and reaction;

and TWA (Mason et al., 2006) involves "think before, while, and after reading." Moreover, MSLQ considers self-regulation an aptitude (Winne & Perry, 2000) which is enduring, at least during research that may take a few weeks (Boekaerts et al., 2000). Hence, a single measurement puts different pieces of information on SRL together and forms a total, predicting a student's self-regulation ability (Winne & Perry, 2000) (see Appendix A).

Procedure and Data Collection

Before the treatment, participants were given the Pintrich et al.'s (1993) MSLQ, as adjusted to reading to gauge their capitality to practice reading self-regulation.   Then SRSD (Harris & Graham, 1996) was implemented in the experimental group for TWA strategy for comprehension of expository reading texts (Mason, 2004). The author (i.e., the teacher) had three briefing meetings with learners before the treatment administration and put SRSD for TWA into practice on sample practice reading tasks so that they became thoroughly familiar with the treatment. Following Mason et al. (2006), in the before-reading stage of TWA, she taught students to make background knowledge active by guessing the writer's purpose, their knowledge of the topic, and their future learning about it through reading this text (Ogle, 1989, as cited in Mason et al., 2006). During reading, students were urged to ponder on their reading pace, connect what they know, and read parts of text again (Graves & Levin, 1989, as cited in Mason et al., 2006). After reading, students first learned to find main ideas utilizing the RAP strategy (i.e., reading the paragraph, asking themselves what sentence in the paragraph includes its main idea, paraphrasing the main idea) (Ellis & Graves, 1990, as cited in Mason et al., 2006). Then, they summarized or paraphrased the reading passage, utilizing Brown and Day's (1983, as cited in Mason et al., 2006) summarization strategy (i.e., deleting trivial and redundant information, replacing a list of words or actions with super-ordinate words, selecting or making a topic sentence). Finally, students were asked to retell the passage orally, with the teacher's support when necessary.

All the above-mentioned procedure of TWA (Mason, 2004) was implemented through the framework of SRSD (Harris & Graham, 1996) based on Hedin et al. (2011) and Mason et al. (2006). In other words, the researcher began instruction with modeling, proceeded with guided (collaborative) practice, and

finished it with pair or independent practice as follows:

Discussion of Strategy. The teacher discussed TWA use and how it can help reading, fostered pre-skills necessary for reading expository texts, and explained each step of TWA.

Modeling. The students observed and interacted with the teacher as strategy use was modeled and demonstrated by her. Moreover, she used self-sentences during reading to support and guide the TWA process. As an example, she may say before reading, "It is easy to understand this text since I am sure the stages in TWA will help me comprehend the text. What should I do first?" Students followed the teacher and wrote self-statements they could utilize before, while, and after reading.

Guided (Collaborative) Practice Leading to Memorization of Strategy. In collaborative practice, the teacher and students worked together to put into practice the phases of TWA. The teacher encouraged students to utilize their self-statements when reading and to monitor strategy steps that were completed. The teacher observed student progress. Later, when students mastered the use of strategies, the teacher helped them merely when there was a problem in the practice of strategy. Helping students memorize the strategy steps and complete them, the teacher urged them to reflect on the reponses after reading, reminding them of putting phases into practice.

Pair (Independent) Practice. Pair practice was put into practice after students became skillful in using TWA with teacher support. At first, student pairs practiced doing each phase, monitored their performance, and reported the outcomes of their reading to the instructor, with the instructor helping them when necessary. This practice was repeated until students could go through the stages of the strategy by themselves without the teacher or classmate's help.

In the control group, the students studied the same expository reading passages as those read in the experimental group but based on the routine method. In other words, they answered pre-reading questions, read the text, summarized or paraphrased it, and answered post-reading questions. Then after the treatment, participants were given Pintrich et al.'s (1993) MSLQ, as adjsuted to reading, to gauge their EFL reading self-regulation.

Results

Preliminary checks for the one-way ANCOVA test involve the examination of normality, the reliability of the covariate (the pretest in this study), the linearity of the relationship between the covariate and the dependent variable (i.e., the posttest), and the homogeneity of regression slopes (Pallant, 2005). Table 2 below depicts the results of the normality test for MSLQ.

Table 2

Test of Normality for MSLQ

|		Kolmogorov-Smirnova			Shapiro-Wilk		
	group	Statistic	df	*p*	Statistic	df	*p*
Post-MSLQ	experimental	.075	20	.200*	.959	20	.524
	control	.136	20	.200*	.945	20	.299

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

As Table 2 suggests, no violation of the normality assumption was detected ($p > .05$). Next, the reliability of the pretest was found to be $\alpha = .71$. After that, the linearity assumption was examined. The reliability (i.e., internal consistency) of the pretest as calculated was found to be $\alpha = .72$. Next, the linearity of the relationship between the covariate and the dependent variable was tested as can be observed in Figure 1.

Figure 1

Test of Linearity for MSLQ
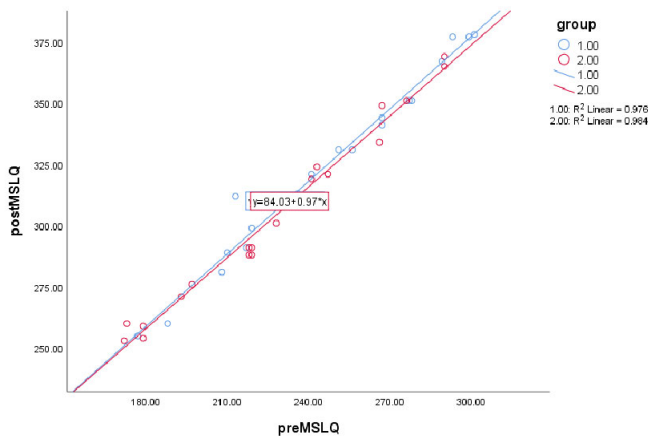
The linear relationship between the posttest and the pretest (experimental groups R^2 Linear = .976 & control groups R^2 Linear = .984) can be seen in Figure 1. Next, the homogeneity of regression was tested, the result of which can be observed in Table 3.

Table 3

Test of Homogeneity of Regression Slopes for MSLQ

Source	Type III Sum of Squares	df	Mean Square	F	p
Corrected Model	55614.710a	3	18538.237	641.915	.000
Intercept	6400.130	1	6400.130	221.614	.000
group	2.099	1	2.099	.073	.789
Pre-MSLQ	51554.328	1	51554.328	1785.147	.000
group * pre-MSLQ	6.428	1	6.428	.223	.083
Error	1039.665	36	28.880		
Total	3997355.000	40			
Corrected Total	56654.375	39			

a. R Squared = .982 (Adjusted R Squared = .980)

Table 3 shows that no significant interaction was detected between groups and the pretest, indicating homogeneity of the regression slopes $F_{(1, 36)} = 6.42, p > .05$. Table 4 below depicts the results of variance homogeneity test for MSLQ.

Table 4

Test of Variance Homogeneity for MSLQ

F	df1	df2	p
.020	1	38	.889

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + pre-MSLQ + group

Table 4 suggests that the error variance was equal across groups, and there was no violation of the assumption, $F_{(1, 37)} = .020, p > .05$. The results of the preliminary checks for the MSLQ revealed that the one-way ANCOVA test could be used to compare the differences of groups in the posttest when pretest scores were

taken as a covariate (Pallant, 2005). The standard deviations and means of the control and experimental classes on MSLQ questionnaire are shown in Table 5 below.

Table 5

Descriptive Statistics of MSLQ

group	Mean	Std. Deviation	N
experimental	323.9	37.5	20
control	303.8	36.8	20
Total	313.8	38.1	40

Table 5 above shows a higher mean score in the posttest in the experimental class than the control class. Table 6 below depicts the one-way ANCOVA results for EFL reading self-regulation via MSLQ by Groups.

Table 6

One-way ANCOVA: Test of Self-regulation of EFL Reading through MSLQ by Groups

Source	Type III Sum of Squares	Df	Mean Square	F	p	η2
Corrected Model	55608.281a	2	27804.141	983.424	.000	.982
Intercept	6434.104	1	6434.104	227.572	.000	.860
Pre-MSLQ	51548.056	1	51548.056	1823.238	.000	.98
group	44.587	1	44.587	0.577	.017	.641
Error	1046.094	37	28.273			
Total	3997355.000	40				
Corrected Total	56654.375	39				

In Table 6, the one-way ANCOVA results on the MSLQ data depicts significant discrepancy between the learners' performance in the control group (M = 303.8, SD = 36.8) and the experimental one (M = 323.9, SD = 37.5) on the posttest, F (1,37) = 0.57, p = .017, η2 = .64.

Discussion

The results revealed that self-regulation teaching based on TWA (Mason, 2004) with SRSD (Harris & Graham, 1996) could foster the self-regulatory reading

skills of EFL learners. Considering the importance of EFL and L2 reading (Mori, 2004; Nation, 2009) and the fact that reading proficiency involves self-regulation (Woolley, 2011), the findings of this research both give us empirical evidence for TWA with SRSD and prove its application to EFL reading, which has not been dealt with in research on self-regulation of EFL and L2 reading through SRSD (e.g., Hamoulah Mardani &Afghari, 2017; Hedin et al., 2011; Roohani and Asiabani, 2015). Of course, the findings of Roohani and Asiabani (2015) and Roohani et al. (2016) that SRSD with TWA instruction could improve the EFL participants' metacognition which is a major component of self-regulation (Zimmerman, 2002, 2008) could be extended in the present study.

The findings of this research could not only empirically proved the successful application of TWA with SRSD on EFL expository texts but also prove that the EFL reading can be effectively regulated through it. Moreover, this research could experimentally extend Mason et al.'s (2006) to the EFL context; he maintains that SRSD for TWA helps readers to actively and consciously participate in the reading process. The results of this research which was the first to explore SRSD TWA on EFL expository texts also chime with Paris and Paris' (2001) support for teaching how to use SRL processes and Woolley's (2011) assertion that independent readers can be those who are taught self-regulation.

Similarly, the results have been consistent with those gained in the studies (e.g., Housand & Reis, 2008; Perry, 1998) delineating the teachers' main part in effectively helping learners in order to enhance their self-regulation ability in reading. This is congruent with theoretical assertions on teachers's role in fostering learners' self-regulation ability not only in academic subjects (Moos & Ringdal, 2012) but also in L1 reading (Paris & Paris, 2001). In addition, it highlights how Souvignier and Mokhlesgerami (2006) urged teachers to help learners in making use of reading strategies in a self-regulatory manner and how Butler (2002, as cited in Woolley, 2011) maintained that the crucial dimension of becoming a skilled reader is the capability to self-regulate one's reading process.

Likewise, the findings not only confirm that self-regulation of reading through TWA within SRSD which is teachable in the L1 context (Hedin et al., 2011; Mason, 2004; Mason et al., 2006; Mason et al., 2012; Mason, 2013; Mason et al., 2013) can be taught in the EFL context. In addition, they substantiate what Chamot

(2014) asserted about the part self-regulation plays in overcoming L2 reading difficulties and what Graham and Harris (2007) stated about how SRSD instruction could offer tangible models for what has to occur in the mind. The obtained results also corroborated those that showed how L2/EFL readers became self-regulated via other teaching plans (e.g., Mbato, 2013) and how other SRL models could be successfully taught L2 and EFL readers (e.g., Morshedian, et al., 2017).

On the one hand, Pintrich's (2000) self-regulation model, i.e., the basis of MSLQ (Pintrich et al., 1993) shares some features with TWA, i.e., it has almost three phases roughly corresponding to those TWA (Mason, 2004). On the other hand, there are three main objectives for SRSD teaching; helping learners develop higher-order cognitive processes entailed in academic setting, assisting them to foster self-regulatory strategies to manage and monitor their academic performance, and fostering positive attitudes in them about themselves as students and learning. Hence, these results seem worthwhile and interesting because the obtained results can be traced back in the experimental class's going through SRSD teaching in several phases; they practiced the TWA during these phases to uncover the text meaning via reflection. In the thinking-before-reading phase, they learned thinking about their knowledge and deciding what they are going to acquire. In the thinking-while-reading phase, they monitored their reading pace and connected their background knowledge to the reading content. In the thinking-after-reading phase, they summarized details, found the main idea, and evaluated what they have read.

Conclusion and Pedagogical Implications

The results of this research support the conclusion that SRSD for TWA can be effectively carried out in EFL reading classes to help learners self-monitor and self-evaluate while reading, which is regarded equal to reading competence (Butler, 2002, as cited in Woolley, 2011). In other words, it can be concluded that implementing TWA through the SRSD is effective in supporting EFL learners to become independent EFL readers and maintain their EFL reading skills. Likewise, in line with Graham & Harris (2007) assertion that in SRSD teaching the teacher will have students collaborate in finding the useful strategy and will pave the ground for students to utilize it, they indicate that not only EFL reading teachers but also, in the first place, syllabus designers and material developers should pay due attention

to SRSD self-regulatory procedure. That is, EFL redaing teachers are urged to utilize TWA through SRSD in their classes to assist students to practice reading self-regulation. From another perspective, neglecting the strategies' vital role in EFL reading particularly that of TWA through SRSD, makes students passive readers who cannot set attainable and realistic goals, self-regulate and self-evaluate and become proficient, independent readers. This study also contributes the field through its detailed procedure section, SRSD for TWA was introduced to EFL educators as a practical model to foster the self-regulation of their students.

Nonetheless, the limitations of this study should be acknowledged. This study investigated SRSD for TWA, and MSLQ (Pintrich et al., 1993), which roughly matches TWA, was utilized in this study because no measure has yet been developed to evaluate the outcome of implementing SRSD for TWA. Nevertheless, it would be worthy to carry out further research to further examine SRSD for TWA utilizing other SRL instruments or qualitatively by such instruments as think-aloud protocols or interviews. Also, the participants in the study were only female due to practical reasons. Thus, future studies are to be conducted to probe into the probable gender-related effects on the outcome of practicing self-regulation of EFL reading to generalize the results to males because the literature is inconclusive concerning the role of gender in self-regulation ability (Pintrich & Zusho, 2007).

Still, another limitation of this study seems to be no validation of MSLQ as adapted to the reading and the use of intact classes in the study because of the practical restrictions. Hence, future research can be conducted not only after validating MSLQ as adapted to the reading but also with the aim of delving into the impact of SRSD for TWA training on the reading ability of EFL learners, their motivation and attitude to read in English. The only delimitation of the study seems to be the inclusion of EFL expository texts in the research because they include different text types and involve using many reading strategies at the same time (Gersten et al., 2001).

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Appendix A
MSLQ (from Pintrich et al., 1993)

The following questions ask about your motivation for and attitudes about this class. Remember there is no right or wrong answer; just answer as accurately as possible. Use the scale below to answer the questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

1	2	3	4	5	6	7
Not at all true of me	Not very much like me	Somewhat not like me	Somewhat like me	Like me	Much like me	Very true of me

Part A. Motivation

1 In a class like this, I prefer reading material that really challenges me so I can learn new things. 1 2 3 4 5 6 7

2 If I read in appropriate ways, then I will be able to understand the reading material in this course. 1 2 3 4 5 6 7

3 When I take a test I think about how poorly I am doing compared with other students. 1 2 3 4 5 6 7

4 I think I will be able to use what I learn in this course in other courses. 1 2 3 4 5 6 7

5 I believe I will receive an excellent grade in this class. 1 2 3 4 5 6 7

6 I'm certain I can understand the most difficult reading material presented in this course. 1 2 3 4 5 6 7

7 Getting a good grade in this class is the most satisfying thing for me right now. 1 2 3 4 5 6 7

8 When I take a test I think about items on other parts of the test I can't answer. 1 2 3 4 5 6 7

9 It is my own fault if I don't understand the reading material in this course. 1 2 3 4 5 6 7

10 It is important for me to understand the reading material in this class. 1 2 3 4 5 6 7

11 The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade 1 2 3 4 5 6 7

12 I'm confident I can learn the basic concepts taught in 1 2 3 4 5 6 7

this course.

13	If I can, I want to get better grades in this class than most of the other students.	1	2	3	4	5	6	7
14	When I take tests I think of the consequences of failing.	1	2	3	4	5	6	7
15	I'm confident I can understand the most complex reading material presented by the instructor in this course.	1	2	3	4	5	6	7
16	In a class like this, I prefer reading material that arouses my curiosity, even if it is difficult to learn.	1	2	3	4	5	6	7
17	I am very interested in the content areas of reading materials in this course.	1	2	3	4	5	6	7
18	If I try hard enough, then I will understand the reading material.	1	2	3	4	5	6	7
19	I have an uneasy, upset feeling when I take an exam.	1	2	3	4	5	6	7
20	I'm confident I can do an excellent job on the assignments and tests in this course.	1	2	3	4	5	6	7
21	I expect to do well in this class.	1	2	3	4	5	6	7
22	The most satisfying thing for me in this course is trying to understand the content and reading selections as thoroughly as possible.	1	2	3	4	5	6	7
23	I think the reading material in this class is useful for me to learn.	1	2	3	4	5	6	7
24	When I have the opportunity in this class, I choose reading assignments that I can learn from even if they don't guarantee a good grade.	1	2	3	4	5	6	7
25	If I don't understand the reading material, it is because I didn't try hard enough.	1	2	3	4	5	6	7
26	I like the reading selections of this course.	1	2	3	4	5	6	7
27	Understanding the reading selections of this course is very important to me.	1	2	3	4	5	6	7
28	I feel my heart beating fast when I take an exam	1	2	3	4	5	6	7
29	I'm certain I can master the reading skills being taught in this class.	1	2	3	4	5	6	7
30	I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.	1	2	3	4	5	6	7

| 31 | Considering the difficulty of this course and its reading selections, the teacher, and my skills, I think I will do well in this class. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Part B. Learning Strategies

32	When I study the readings for this course, I outline the material to help me organize my thoughts.	1	2	3	4	5	6	7
33	During class time I often miss important points because I'm thinking of other things.	1	2	3	4	5	6	7
34	When reading in this course, I often try to explain the reading material to a classmate or friend.	1	2	3	4	5	6	7
35	I usually read in a place where I can concentrate on my reading work.	1	2	3	4	5	6	7
36	When reading in this course, I make up questions to help focus my reading.	1	2	3	4	5	6	7
37	I often feel so lazy or bored when I read in this class that I quit before I finish what I planned to do.	1	2	3	4	5	6	7
38	I often find myself questioning things I read in this course to decide if I find them convincing.	1	2	3	4	5	6	7
39	When I read in this class, I practice saying the material to myself over and over.	1	2	3	4	5	6	7
40	Even if I have trouble reading the material in this class, I try to do the work on my own, without help from anyone.	1	2	3	4	5	6	7
41	When I become confused about something I'm reading in this class, I go back and try to figure it out.	1	2	3	4	5	6	7
42	When I read in this course, I go through the readings and my class notes and try to find the most important ideas.	1	2	3	4	5	6	7
43	I make good use of my reading time for this course.	1	2	3	4	5	6	7
44	If course readings are difficult to understand, I change the way I read the material.	1	2	3	4	5	6	7
45	I try to work with other students from this class to complete the reading assignments.	1	2	3	4	5	6	7
46	When reading in this course, I read my course readings over and over again.	1	2	3	4	5	6	7
47	When a theory, interpretation, or conclusion is presented	1	2	3	4	5	6	7

    in the reading selections, I try to decide if there is good supporting evidence.

48	I work hard to do well in this class even if I don't like what we are doing.	1	2	3	4	5	6	7
49	I make simple charts, diagrams, or tables to help me organize reading material.	1	2	3	4	5	6	7
50	When studying for this course, I often set aside time to discuss reading material with a group of students from the class.	1	2	3	4	5	6	7
51	I treat the reading material as a starting point and try to develop my own ideas about it.	1	2	3	4	5	6	7
52	I find it hard to stick to a reading schedule.	1	2	3	4	5	6	7
53	When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions.	1	2	3	4	5	6	7
54	Before I read new reading material thoroughly, I often skim it to see how it is organized.	1	2	3	4	5	6	7
55	I ask myself questions to make sure I understand the material I have been reading.	1	2	3	4	5	6	7
56	I try to change the way I read in order to fit the course requirements and the instructor's teaching style.	1	2	3	4	5	6	7
57	I often find that I have been reading but don't know what it was all about.	1	2	3	4	5	6	7
58	I ask the instructor to clarify concepts in reading selections I don't understand well.	1	2	3	4	5	6	7
59	I memorize key words to remind me of important concepts in reading selections.	1	2	3	4	5	6	7
60	When a reading selection is difficult, I either give up or only read the easy parts.	1	2	3	4	5	6	7
61	I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when reading in this course.	1	2	3	4	5	6	7
62	I try to relate ideas in the reading selections in this course to the material in others whenever possible.	1	2	3	4	5	6	7
63	When I read in this course, I go over my class notes and make an outline of important concepts.	1	2	3	4	5	6	7

64	When reading for this class, I try to relate the material to what I already know.	1	2	3	4	5	6	7
65	I have a regular place set aside for reading.	1	2	3	4	5	6	7
66	I try to play around with ideas of my own related to what I am reading in this course.	1	2	3	4	5	6	7
67	When I study for this course, I write brief summaries of the main ideas from the readings and my class notes.	1	2	3	4	5	6	7
68	When I can't understand the reading material, I ask another student in this class for help.	1	2	3	4	5	6	7
69	I try to understand the material in this class by making connections between the readings and the concepts from the lectures.	1	2	3	4	5	6	7
70	I make sure that I keep up with the weekly reading assignments for this course.	1	2	3	4	5	6	7
71	Whenever I read an assertion or conclusion in this class, I think about possible alternatives.	1	2	3	4	5	6	7
72	I make lists of important items in this course and memorize the lists.	1	2	3	4	5	6	7
73	I attend this class regularly.	1	2	3	4	5	6	7
74	Even when reading materials are dull and uninteresting, I manage to keep working until I finish.	1	2	3	4	5	6	7
75	I try to identify students in this class whom I can ask for help if necessary.	1	2	3	4	5	6	7
76	When reading in this course I try to determine which reading parts I don't understand well.	1	2	3	4	5	6	7
77	I often find that I don't spend very much time on reading the material in this course because of other activities.	1	2	3	4	5	6	7
78	When I read in this class, I set goals for myself in order to direct my activities in each reading period.	1	2	3	4	5	6	7
79	If I get confused taking notes when reading, I make sure I sort it out afterwards.	1	2	3	4	5	6	7
80	I rarely find time to review my notes or readings before an exam.	1	2	3	4	5	6	7
81	I try to apply ideas from reading selections to activities in other class such as lecture and discussion.	1	2	3	4	5	6	7